

**Notice of Allowability**

Application No.

10/691,540

Examiner

Matthew J. Song

Applicant(s)

MOTOKI ET AL.

Art Unit

1722

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/19/2007.
2. ☒ The allowed claim(s) is/are 7,13,25,26,29,30,34 and 59.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☒ Certified copies of the priority documents have been received in Application No. 09/560,818.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 11/3/06; 4/1/04;10/24/03.

### **DETAILED ACTION**

#### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/19/2007 has been entered.

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael Mukuch on 6/4/2007.

The application has been amended as follows:

- In the specification, delete the paragraph following "CROSS REFERENCE TO RELATED APPLICATION" and INSERT the following paragraph as follows:

--This application is division of Application No. 09/560,818, filed April 28, 2000, now U.S. Pat. No. 6,693,021, issued Feb. 17, 2004, which is a continuation-in-part (CIP) of International Application No. PCT/JP98/04908 having an international

Art Unit: 1722

filing date of October 29, 1998 and a priority date of October 30, 1997, all of which are incorporated herein by reference in their entirety. The benefit of priority from Japanese Patent Application Nos. 298300 (filed October 30, 1997), 009008 (filed January 20, 1998), and 102546 (filed April 14, 1998) is claimed.--

*Allowable Subject Matter*

2. Claims 7, 13, 25, 26, 29, 30, 34 and 59 are allowed.
3. The following is an examiner's statement of reasons for allowance: The closest prior art is Zheleva et al (Dislocation density reduction ...), Shakuda (US 5,838,029), and Mauk (US 5,828,088). Zheleva et al teaches forming a patterned layer of SiO<sub>2</sub> on a AlN buffer layer formed on a SiC substrate (pg 2473-2474). Zheleva et al also teaches forming GaN pyramids and laterally coalescence to produce nearly defect free regions (Fig 5 and pg 2474). Shakuda teaches using a GaAs for GaN semiconductors (col 10, ln 10-30). Mauk teaches the alignment of stripes of a mask on the wafer surface is an important factor in optimizing the lateral overgrowth and optimization of stripe opening alignments on other crystallographic orientations and other substrate materials (col 5, ln 55-67). However, the combination of Zheleva et al, Shakuda and Mauk does not teach or suggest the claimed shape of openings and the alignment of the windows set forth in claims 25 and 30. The claimed shape and alignment of the windows produces advantages over the prior art, as evidenced in applicant's embodiments 6 and 7 on pages 38-44 of the specification.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

Art Unit: 1722

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Song whose telephone number is 571-272-1468. The examiner can normally be reached on M-F 9:00-5:00.

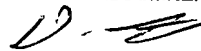
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Matthew J Song  
Examiner  
Art Unit 1722

MJS  
June 4, 2007

DUANE SMITH  
PRIMARY EXAMINER

  
6-4-07